REMARKS

This Amendment is responsive to the Office Action identified above, and is responsive in any other manner indicated below.

EXTENSIVE PROSECUTION NOTED

Applicant and the undersigned respectfully note the extensive prosecution which has been conducted to date with the present application, and thus Applicant and the undersigned respectfully request any help from the Examiner toward movement of the present application quickly to allowance.

PENDING CLAIMS

Claims 1-11, 18-29 and 36-47 were pending, under consideration and subject to examination in the Office Action. Claim 1 has been amended to closely match independent claim 48, and other ones of Applicant's claims were minorly amended to match antecedents to amended claim 1. At entry of this paper, Claims 1-11, 18-29 and 36-49 will be pending for further consideration and examination in the application.

REJECTION UNDER 35 USC §103

All 35 USC §103 rejections of Claims 1-11, 18-29 and 36-47 are respectfully traversed. All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated herein by reference. Further, all Office Action statements regarding the prior art rejections are

respectfully traversed. As additional arguments, Applicant respectfully submits the following comments supplied from Applicant's foreign representative.

As to the rejection over Rosenberg, Rosenberg does not disclose the art concerning DNA inspection at all. Accordingly, Rosenberg cannot be combined references cited in the Office Action. At the outset, as to the requirements to support a rejection under 35 U.S.C. 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under §103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge". The court pointed out:

> The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software"

and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Again, Rosenberg does not disclose the art concerning DNA inspection at all. Accordingly, it is respectfully submitted that the Examiner's attempt to combine Rosenberg (non-DNA) with the other DNA references is simply an improper hindsight attempt simply to "[use] that which the inventor taught against its teacher." That is, it is respectfully submitted that there is no suggestion provided by the references themselves to combine, and instead, it is respectfully submitted that the Examiner's statements are improper (rejection-serving) conclusionary statements. Accordingly, reconsideration and withdrawal of the usage of Rosenberg in support of the rejection, are respectfully requested.

Regarding other specific ones of the references, the following additional comments are respectfully submitted. In Rava, there is a disclosure concerning rotating polyhedral mirrors. However, it is an art of scanning **a single beam**. In Rava, there is **no disclosure concerning the art of scanning "multiple beams"**.

In the item 23 of the "response to argument", the Examiner states that Stern discloses simultaneous detection of multiple fluorescent signals as result of using beam splitters. However, in Stern, **there is no teaching and disclosure concerning the art of simultaneous irradiation of multiple beams each of which corresponds to each of the plural targets**.

Applicant again, respectfully insists that none of the references (alone or in combination) disclose the following features, i.e.:

(1) A plurality of laser beams are simultaneously irradiated to a plurality of DNA probe cells. Each of the laser beams corresponds to each of the DNA probe cells; and,

(2) Fluorescent lights which were simultaneously generated from the plurality of DNA probe cells by the irradiation of laser beams are separately detected from each of the plurality of DNA probe cells.

In terms of claim language, independent claim 1, for example, recites "**simultaneously irradiating plural DNA probe cells** out of said plurality of DNA probe cells of said DNA chip **with multi-spot excitation lights under a condition that each of spots of said multi-spot excitation lights corresponds to each of said plural DNA probe cells** through an objective lens **so as to generate fluorescent lights from any fluorescently labeled target DNA hybridized to ones of the DNA probes of the plural DNA probe cells**; separating said generated fluorescent lights from said multi-spot excitation lights into separate fluorescent lights along separate optical paths; and **detecting said separate fluorescent lights simultaneously with a plurality of sensors, with each sensor corresponding to each of said DNA probe cells irradiated**, so as to catalog positions and intensities of detected fluorescent lights which are representative of a coupled state of the hybridized target DNA on said DNA chip." Other ones of Applicant's claims have similar and/or analogous limitations, e.g.: simultaneously irradiating a plurality of the DNA probe cells of said DNA chip with a corresponding plurality of multi-spot excitation lights through an objective lens so as to generate fluorescent lights from

any fluorescently labeled target DNA hybridized to ones of the DNA probes of the plurality of DNA probe cells; ...and detecting said separate fluorescent lights simultaneously with a plurality of sensors, with each sensor corresponding to each of said DNA probe cells irradiated.

Of further interest, independent claim 48 recites "simultaneously irradiating plural DNA probe cells out of said plurality of DNA probe cells of said DNA chip with a corresponding plurality of multi-spot excitation lights under a condition that each spot of said multi-spot excitation lights **corresponds** to a DNA probe cell through an objective lens so as to generate fluorescent lights from any fluorescently labeled target DNA hybridized to ones of the DNA probes of the plural DNA probe cells; ...and detecting said separate fluorescent lights simultaneously with a plurality of sensors, with each sensor **corresponding** to each of said DNA probe cells irradiated...".

Finally, independent claim 49 recites "simultaneously irradiating a plurality of the DNA probe cells of said DNA chip with a corresponding plurality of multi-spot excitation lights under a condition that each spot of the multi-spot excitation lights **corresponds** to one DNA probe cell through an objective lens so as to generate fluorescent lights from any fluorescently labeled target DNA hybridized to ones of the DNA probes of the plurality of DNA probe cells; ...and detecting said separate fluorescent lights simultaneously with a corresponding plurality of sensors under a condition that each separate fluorescent light **corresponds** to one sensor...".

In order to properly support a §103 obviousness-type rejection, the reference not only must suggest the claimed features, but also must contain the motivation for

modifying the art to arrive at an approximation of the claimed features. However, the cited art does not adequately support a §103 obviousness-type rejection.

More particularly, it is respectfully noted that rejection based on the first three (out of four) references had been previously overcome in Applicant's prior papers. That is, none of the three Pinkel *et al.*, Stern and Rosenberg references disclosed an arrangement where fluorescent lights generated simultaneously from a plurality of DNA probe cells are separately/simultaneously detected with separate detectors for each of the DNA probe cells.

That is, Pinkel *et al.* uses a standard fluorescence microscope arrangement and a CCD camera to acquire color images. Pinkel *et al.*'s sample is not a DNA probe. In Pinkel *et al.*, there is no disclosure that a plurality of DNA probe cells are irradiated simultaneously with multi-spot exciting lights, and that the generated and separated fluorescent lights are simultaneously detected with a plurality of sensors each corresponding to each of the DNA probe cells irradiated.

To conclude, given that none of the applied references (taken alone or in combination) disclosed any arrangement even closely resembling Applicant's above-highlighted claim features/limitations, it is respectfully submitted that no combination of such references would have disclosed or suggested Applicant's invention. As is clear from the above, the present invention is very different from the references, and accordingly, the present invention is patentable thereover.

As a result of all of the foregoing, it is respectfully submitted that the applied art (taken alone and in the Office Action combinations) would not support a §103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and

withdrawal of such §103 rejection, and express written allowance of all of the §103 rejected claims, are respectfully requested.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations throughout prosecution of the present application are without prejudice or disclaimer of any scope or subject matter. Applicant respectfully reserves all rights to file related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed *i.e.*, Applicant continues to maintain no intention or desire to dedicate or surrender any limitations/features.

EXAMINER INVITED TO TELEPHONE

The Examiner is invited to telephone the undersigned at the local D.C. area number of 703-312-6600, to discuss an Examiner's Amendment or other suggested action for accelerating prosecution and moving the present application to allowance.

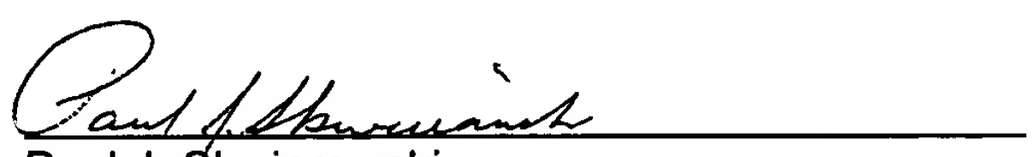
CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

A Petition for Extension of Time is submitted concurrently herewith. To whatever other extent is actually appropriate, Applicant respectfully petitions the

Commissioner for an extension of time under 37 CFR §1.136. A Form PTO-2038 also is being filed concurrently herewith. Please charge any actual deficiency in appropriate fees due to ATS&K Deposit Account No. 01-2135 (as Case No. 500.39147X00).

Respectfully submitted,



Paul J. Skwierawski
Registration No. 32,173
ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 North Seventeenth Street, Suite 1800
Arlington, Virginia 22209-3873, USA
Telephone 703-312-6600
Facsimile 703-312-6666